NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

Pasture and Hay Planting

(Acre)

Code 512

DEFINITION

Establishing and reestablishing long-term stands of adapted species of perennial, biennial, or reseeding forage plants. (Includes pasture and hayland renovation. Does not include grassed waterways or outlets on cropland.)

PURPOSES

To reduce erosion, to produce high-quality forage, and to adjust land use.

CONDITIONS WHERE PRACTICE APPLIES

On existing pasture and hayland or on land that is converted from other uses.

CRITERIA

I. Establishment or Renovation by No-Till Methods

A. Graze or mow close existing sod fields in the fall and early spring to weaken vegetation prior to reseeding.

B. Test the soil and apply lime, phosphorus and potassium as recommended. (Do not use nitrogen since it increases grass competition to new legume seedings.) Apply lime preferably 9 months ahead of seeding.

C. Select a grass-legume mixture from those listed on page 3 of this standard and specification.

D. Inoculate legume seeds with proper inoculant.

E. Use a no-till type seeder to sow grass-legume mixtures at rates specified.

F. For spring seeding, seed as early as practical and before May 10. Make late summer seedings from August 10 to September 30.

G. Control weeds and competition by mowing, grazing or with herbicides.

Note: No-till legume mixtures of red clover may be seeded in April or early May. Preferred seeding time for alfalfa is mid-August to mid-September. Alfalfa may be seeded in mid-May if competition from perennial weeds is controlled. Red Clover may be frost seeded during February into existing grass sods if sod is sufficiently suppressed.

II. Establishing or Renovating by Conventional Tillage Methods.

A. Test the soil and apply lime as recommended – preferably 6 months ahead of seeding.

B. Prepare a firm seedbed containing enough fine soil particles for uniform shallow coverage of the seed. When preparing seedbed on sloping land with serious erosion potential, perform all tillage and seeding operations on the contour.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

Indiana NRCS FOTG – April 1984.

C. Fertilizer may be applied at rates recommended by soil tests to the soil surface and worked into the soil or applied through a drill at seeding time.

D. Select seeding mixtures from those listed on page 3 of this practice standard

E. For spring seeding, seed as early as practical and before May 15. Make late summer seeding from August 10 to September 30. In some instances, for spring seedings it may be advisable to use one bushel of oats as a companion crop to help control erosion and weed growth. Clip oats in milk stage.

F. Inoculate legume seeds with proper inoculant.

G. Cover seed ¼ to ½ inch deep by using a grassland drill, grain drill with press wheels, cultipacker seeder or by broadcasting where cultipacking is performed before and after the seed is broadcast.

CONSIDERATIONS

Planning considerations for water quantity and quality.

Quantity

1. Effects on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, deep percolation, and ground water recharge.

Quality

1. Effects on erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances carried by runoff.

2. Effects on the use and management of nutrients and pesticides and resulting effects on surface and ground water quality.

3. Effects on the visual quality of downstream water resources.

PLANS AND SPECIFICATIONS

Site specific plans will be developed according to this practice standard.

OPERATION AND MAINTENANCE

Management During The Seeding Year

Exclude all livestock until new seeding is well established.

If necessary to control weeds and/or residual stand competition, mow or lightly graze the unwanted vegetation when it is 8 to 10 inches in height to reduce competition with the new seeding. Mow high enough to avoid clipping the new seedings. Livestock should be removed when they begin to graze new seedings. The danger of herbicide carry over from previous row crops should be considered prior to seeding of meadows. Existing stands of alfalfa should be killed 6-9 months ahead of reseeding alfalfa as a precaution against alfalfa toxicity.

SEED MIXTURES FOR PASTURE AND HAYLAND

Seeding Rates of Pure Live Seed Per Acre[1/]

LEGUME SEED				GRASS SEED (one only)					
Primary Legume		Secondary Legume		Orchard grass	Tall Fescue[2/]	Smooth Brome grass	Reed Canary grass	Timothy	Kentucky Bluegrass
Alfalfa	8-10			4-6	6-8	5-7		2-4	
Alfalfa	12-18	(hayland only)							
Alfalfa	6-8	Red Clover	2-4	4-6	6-8	5-7		2-4	
Alfalfa	6-8	Ladino Clover	¼	4-6	6-8	5-7		2-4	
Red clover	6-8			4-6	8-10	5-7		2-4	
Red clover	4-6	Ladino Clover	¼	4-6	8-10	5-7		2-4	
Red clover	6-8	Korean Lespedeza	8		8-10				
Red clover	6-8	Alsike Clover	2	4-6	8-10	5-7	3-5	2-4	
Alsike clover	2	Ladino Clover	¼	4-6	8-10	5-7	3-5	2-4	
Birdsfoot trefoil	5			4-6				2-4	2-4
Korean lespedeza	15			4-6	8-10				
*Red clover	6-10		*Frost seeded or no-till seeded into existing grass sods						

[1/] For PLS determination refer to agronomy section of Field Reference for planning.
[2/] Endophyte free varieties.

USE AND SITE ADAPTATION OF LEGUMES AND GRASSES

	Pasture		Hay	Site Adaption			Suitable pH
	Rotation Grazing	Continuous Grazing		Droughty	Well Drained	Poorly Drained	
Alfalfa	1		1	1	1		6.2-7.5
Alsike	1	2	1	2	1	1	5.5-7.5
Birdsfoot trefoil	1	2	1	2	1	2	5.5-7.0
Ladino clover	1	1	2		1	1	5.6-7.0
Korean Lespedeza	1	1	2	1	1		4.5-6.5
Red clover	1	2	1	2	1	2	6.0-7.5
White clover	1	1			1	1	5.6-7.0
Kentucky bluegrass	1	1		2	1	2	5.5-7.0
Orchardgrass	1	1	1	2	1	2	5.5-7.5
Reed canarygrass	1	2	2	1	1	1	5.0-7.5
Smooth bromegrass	1	2	1	1	1		5.5-8.0
Tall fescue	1	1	2	2	1	2	5.0-8.0
Timothy	1	2	1		1	2	4.5-8.0

Instructions for use of the above chart:

The figure 1 indicates the plant is well adapted, 2 indicates the plant can be used but is less well adapted and a blank space indicates that it is not adapted or not suggested for use.

Birdsfoot trefoil and Smooth bromegrass are well adapted in the northern half of Indiana. Korean lespedeza is especially adapted in Southern Indiana.